

Food Science Questions- Cobra Science Olympiad Invitation

Part 1: Impound your notebook (18 pts): 7:45-8:30am Prep Room between Lab 600-B & 600-C

Part 2: Lab task (22 pts): 30 minutes

Part 3: Written test (60 pts): 20 minutes

Total: 100 pts, 50 minutes

Team Name: _____ Team Number: _____

Team Member Name(s): _____

School Name: _____

Scores:

Part 1 _____

Part 2 _____

Part 3 _____

Total _____

Ranking _____

Scoring Rubric and Keys:

Notebook Impound (7:45-8:30am; 18 pts):

All 9 pages submitted, check for completion of lab tasks, and all blanks filled.

Late impound: -6pts;

Blanks not filled/no picture: -0.5pt/sheet (max);

Results missing: -0.5pt/sheet (height of ice cream; weight of cheese, weight of butter)

Recording data without unit: no units -4pts; some w/o units -2pts

Lab task: “Determine milk fat mass from cream” (30 mins; 22 pts)

Box items no violation: 2pts

Wear goggles/lab coat/gloves: 2pts

Clean up: 2pts

Each blank in lab procedure: 1pt; 7x1pt = 7pts

Weight of cream within range (supervisor’s number \pm 2g): 3pts

Weight of butter within range (supervisor’s number \pm 5g): 3pts

Calculation: 3pts

Request more cream: -2pts

Recording data without unit: no units -2pts; some w/o units -1pts

Weight of butter check (over 2g difference, or no product turned in): -2pts

Written test: (keys) (etc means there are other answers)

(1)cow; water; protein, lactose, fat, vitamin, mineral, etc

(2)casein; whey

(3)white; carotenoids

(4)glucose; galactose

(5)A

(6)B

(7)soy milk etc

(8)ester

(9)A;B

(10)lactase; lactose;B; lactose-free milk etc

(11)peptide; A; histidine; alanine

- (12)probiotics; undesirable bacteria
- (13)calcium; magnesium; zinc, etc
- (14)lysine
- (15)3; 3
- (16)B
- (17)liposes; lipolysis
- (18)C
- (19)Food and Drug Administration
- (20) National Labeling and Education Act
- (21)B
- (22a)292mg
- (22b)64 calories
- (22c)C
- (23)less than 0.5g
- (24)0C or 32F; B
- (25)D
- (26)riboflavin
- (27)lactose; lactic acid
- (28)C
- (29)denaturation

Tie-breakers:

First: (14)-(21) total score

Second: (22a)-(22c)

Third: (26)-(28)